5. Heidi

Program Name: Heidi.java **Input File: heidi.dat**

Heidi has begun thieving. She needs your help determining what she can fit in her bag when she robs a place. Her bag will have a maximum capacity, and each object will have a weight and a value on the black market. You need to determine what the maximum value she can obtain is, and which objects can be used to get that value.

Input: Input will begin with an integer, `num` (`0 < num <= 100`), denoting the number of test cases to follow. Each test case will begin with two space separated integers, `n` (`0 < n <= 100`) and `c` (`0 < c <= 1000`), denoting the number of items, and maximum weight Heidi can carry in her bag. The following line will contain `n` integers, denoting the values of each item Heidi can steal. The line after will contain `n` integers denoting the weights of each item. It can be assumed that the `i`th value corresponds with the `i`th weight. All weights and values will be strictly positive.

Output: Output the maximum value Heidi can obtain, followed by a colon and a space. Followed by a list of items Heidi chose in numerical order (they will be 1-indexed, so the first item in the list is 1, and the last is `n`). If there are no items small enough to fit in the pack, output "`0: None`". If there are multiple combinations with the same weight and value, select the option that contains individual objects with the largest values, even if there are less of them.

Sample input:

```
3
3 50
60 100 120
10 20 30
4 60
40 100 50 60
20 10 40 30
5 100
10 25 30 40 50
30 40 50 60 70
```

Sample output:

```
220: 2 3
200: 1 2 4
65: 2 4
```